

**COMMONWEALTH OF VIRGINIA  
Department of Environmental Quality  
Tidewater Regional Office**

**STATEMENT OF LEGAL AND FACTUAL BASIS  
Minor Permit Modification**

Virginia Electric and Power Company  
Dominion Generation–Yorktown Power Station  
Yorktown, Virginia  
Permit No. TRO-60137  
Effective Date: May 31, 2004  
Minor Modification Date: March 15, 2004  
Expiration Date: December 31, 2007

As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Virginia Electric and Power Company has applied for a minor permit modification to the Title V Operating Permit for its Dominion Generation–Yorktown Power Station facility. The Department has reviewed the application and has prepared a modified Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_ Date: 03/05/04  
David N. Sellers  
(757) 518-2108

Air Permit Manager: \_\_\_\_\_ Date 03/08/04  
Jane A. Workman

Deputy Regional Director: \_\_\_\_\_ Date 03/15/04  
Harold J. Winer

**1. Facility Information**

Permittee

Virginia Electric and Power Company  
5000 Dominion Boulevard  
Glen Allen, Virginia 23060

Facility

Dominion Generation-Yorktown Power Station  
1600 Waterview Road  
Yorktown, Virginia

AFS Identification Number: 51-199-00001

**2. Source Description.**

SIC Code 4911 (Electrical Power Generation) and NAISC ID Code 221112 (Fossil Fuel Electric Power Generation). Dominion Generation-Yorktown Power Station is a power generating facility located by the York River in York County. Three large utility boilers, and several smaller emissions units constitute a "major stationary source" for NO<sub>x</sub>, SO<sub>2</sub>, and particulate matter. It is subject to Titles IV and V of the CAAA as a major acid rain source. Yorktown Power Station is designated an "acid rain facility" subject to the Code of Federal Regulations (40 CFR, Part 72), which implements Title IV and Title V requirements of the 1990 CAAA for acid rain sources. Three Combustion Engineering tangential-fired electric generating units (ES-1, ES-2, and ES-3) combust fossil fuels for the generation of electrical power, including two coal-fired steam generators, and a No. 6 residual fuel oil-fired steam generator.

**Table 1. Summary of Significant Emissions Units and Control Devices**

UNIT/PROCESS	DESCRIPTION
Utility Boiler ES-1	Combusts coal (primary) and petroleum coke; natural gas, refinery gas, and No. 2 distillate oil (startup), and rated at 1697 mmBtu/hr heat input capacity, with a generation capacity of about 170 megawatts. ESP and multicyclone for PM control, and low-NO <sub>x</sub> burners for voluntary NO <sub>x</sub> control.
Utility Boiler ES-2	Combusts coal (primary) and petroleum coke, and No. 2 distillate oil (startup), rated at 1745 mmBtu/hr heat input capacity, with a generation capacity of about 170 megawatts. ESP for PM control, and low-NO <sub>x</sub> burners for voluntary NO <sub>x</sub> control.
Utility Boiler ES-3	Combusts residual oil (primary), natural gas, and #2 distillate fuel oil; and rated at 8061 mmBtu/hr heat input capacity, with a generation capacity of about 850 megawatts. Multicyclone for PM control.
Fluid Heaters ES-4 and ES-5	2 oil-fired fluid heaters, rated at 20.5 and 40.0 mmBtu/hr heat input capacities, respectively, used to preheat fuel combusted in boiler ES-3.
Coal Handling System ES-6	Coal handling system (coal receiving, crushing, conveying equipment, coal pile storage and handling), rated at 600 tons of coal per hour.

**3. Compliance Status.**

A full compliance evaluation of this facility, including a site visit on September 29, 2003, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

**4. Summary of Changes in this Minor Modification to the May 12, 2003 Operating Permit.**

- a. Addition of new Specific Condition VI.A.53, requested by source, to clarify that the requirement to comply with any new Title V requirements did not commence until June 1, 2003 (see SOB Paragraph 5 below).
- b. Revisions to boilerplate wording in general and specific conditions in Operating Permit Sections V, VI, and IX (see SOB Paragraph 6 below).
- c. Addition of new Permit Section X, Phase II acid rain requirements (see SOB Par. 7 below).
- d. Addition of new Operating Permit Section XI, NOx Budget Trading Program Requirements (see SOB Paragraph 8 below).
- e. Revised Specific Conditions III.A.1 to III.A.3 to specify distillate fuel oil as the approved fuel for Units ES-4 and ES-5, as previously specified primarily in Section II of the permit.
- f. Revised Condition 11 to reflect an approved change to the allocation of PM emission limits.
- g. Added three tanks to the insignificant activities list in Section VII of the permit (see SOB Paragraph 10 below).

**5. Addition of New Specific Condition 53 Requested by Source on Commencement of Non-NSR Based Title V Applicable Requirements.**

New Specific Condition VI.A.53 is added, as requested in Form 805 application dated July 1, 2003 (reference 9 VAC 5-80-490) to clarify: "There is no requirement to perform new monitoring, or keep new records, under this Title V permit prior to June 1, 2003". This condition is necessary because the effective date of the operating permit prior to this modification was January 1, 2003, to match the Title IV Phase II Acid Rain permit effectiveness dates. Specific Conditions VI.B.62 to VI.C.67 of the May 12, 2003, permit are now numbered as Specific Conditions VI.B.54 to VI.C.59.

**6. Changes to Wording of General and Specific Conditions in Operating Permit Sections V, VI, and IX to Reflect Current Boilerplate Wording.**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-490 that apply to all federal operating permit (Article 3) sources. These include requirements for submitting semi-annual monitoring reports, and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

- a. A new boilerplate condition (BP General Condition Y) for asbestos includes an additional requirement referencing 40 CFR 61.148. Since Specific Condition V.A.46 through V.A.50 (formerly Specific Conditions V.A.55 through V.A.57 of the May 12, 2003, permit) adequately address asbestos removal requirements, the new boilerplate condition is not added, but the Specific Condition V.A.46 (formerly V.A.55) reference line is revised to add an additional citation.
- b. References to asbestos (Condition VI.C.67.a), NOx Budget Program (Condition VI.C.67.m), and MACT Subpart ZZZZ (Condition VI.C.67.b) are deleted, because asbestos and NOx Budget requirements are adequately addressed elsewhere in the permit; and this source is not subject to the new MACT Subpart ZZZZ, as recently finalized in 2003.
- c. The table is revised in Section Section VIII to reflect revisions in 2003 to federal NSPS Subpart Kb applicable requirements for storage tanks.
- d. In General Condition IX.B.2 (Permit Expiration) at the end of sentence two, "date of issuance" is changed to "effective date" for correctness.
- e. In General Condition IX.D.6 (Annual Compliance Certification), subparagraph b is added as a BP change. Also, at the source's request, shifted the semiannual and annual reporting cycles forward by one month, and addressed the changes, including a one-time, gap-filling, one-month report, in General Conditions C and D.

- f. In General Conditions IX.E.7 (Permit Deviation Reporting) and IX.F.8 (Failure/Malfunction Reporting), “two weeks” is changed to “14 days” for clarity. In General Condition IX.F.8.d, boilerplate wording is revised.
  - g. To reflect the current boilerplate, General Condition IX.J.12 (Permit Modification) is revised, and former condition IX.J.13 is deleted; the remaining general conditions are renumbered as General Conditions K.13 to X.32 (formerly K.14 to X.33). General Condition J.12 cites the following sections of Chapter 80 of the regulations:
    - 9 VAC 5-80-50      Applicability, Federal Operating Permit for Stationary Sources.
    - 9 VAC 5-80-190    Changes to Permits.
    - 9 VAC 5-80-260    Enforcement.
    - 9 VAC 5-80-1100   Applicability, Permits for New and Modified Stationary Sources.
    - 9 VAC 5-80-1790   Applicability, Permits for Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas.
    - 9 VAC 5-80-2000   Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas.
  - h. General Conditions IX.M.16 (formerly IX.M.17) (Duty to Pay Permit Fees) and IX.V.30 (formerly IX.V.31) (Permit Revocation or Termination for Cause) are reworded to reflect the current boilerplate wordings which better characterize regulatory requirements.
7. **Addition of New Operating Permit Section X on Acid Rain Program Requirements.**  
Operating Permit Section X (a new boilerplate section) is added to the permit to reference the current Phase II Acid Rain Permit attachment to the operating permit. The May 12, 2003, operating permit for this source references Phase II acid rain permit requirements (formerly Specific Conditions III.A.17 to III.A.24, and III.E.46). These conditions are moved to Permit Section X as X.A.1 to X.A.8 (Limitations), and X.B.9 (Reporting). The remaining Specific Conditions are renumbered as III.A.17 through VI.C.59. The Acid Rain permit is incorporated into the Title V permit by reference.
8. **Addition of Operating Permit Section XI on NO<sub>x</sub> Budget Trading Program Requirements.**  
Operating Permit Section XI is added to address new NO<sub>x</sub> Budget Trading Program requirements for 2004. The required NO<sub>x</sub> CEM and monitoring systems for this stationary source were approved by DEQ July 15, 2003. The addition of Section XI requires a “minor modification” to this Title V permit (in accordance with 9 VAC 5-80-570.B) prior to the May 31, 2004, compliance date. A completeness determination is not required for minor modifications (9 VAC 5-80-430 D.5). Notification of adjacent states regarding receipt of the application was required, but a request for public comment was not required (9 VAC 5-80-570 D). A 45-day EPA Region III review of the proposed minor permit modification is required (9 VAC 5-80-570 E). Section XI is a boilerplate section, and has the following subparts:
  - a. General Conditions for the NO<sub>x</sub> Budget Permit.
  - b. Standard Requirements for the NO<sub>x</sub> Budget Permit.
  - c. Recordkeeping and Reporting for the NO<sub>x</sub> Budget Permit.
  - d. NO<sub>x</sub> Budget Permit Certification.
  - e. NO<sub>x</sub> Budget Permit Liability.
  - f. NO<sub>x</sub> Budget Permit Effect on Other Authorities.
9. **Future Applicable Requirements.**  
A facilitywide NO<sub>x</sub> limitation for ozone season months of June through August, inclusive, began in June, 2000, and is planned to be revised in June, 2008, in accordance with the September 3, 1996, Ozone Season permit. NO<sub>x</sub> emissions control projects currently being implemented by the source are to meet NO<sub>x</sub> control requirements commencing in June, 2000, and in 2008.

**10. Insignificant Activities.**

The source has listed the following units as insignificant. Information on three existing fuel oil tanks is added to this insignificant emissions unit list (IS-27, 28 and 29), and to the table in Operating Permit Section VII, as requested in the July 1, 2003, Form 805 amendment request.

Emission Unit No.	Insignificant Emissions Unit Description	Citation	Pollutant(s) Emitted (for 9 VAC 5-80-720 B)	Rated Capacity (for 9 VAC 5-80-720 C)
IS-1	No. 2 Fuel Oil Storage Tank– Empty	9 VAC 5-80-720 B	VOC	15,229 gallons
IS-2	No. 2 Fuel Oil Storage Tank	9 VAC 5-80-720 B	VOC	466,379 gallons
IS-3	Kerosene Dispensing Station	9 VAC 5-80-720 B	VOC	5,000 gallons
IS-4	Turbine Lube Oil System	9 VAC 5-80-720 B	VOC	
IS-5	Induced Draft Fan Lube Oil System	9 VAC 5-80-720 B	VOC	
IS-6	Forced Draft Fan Lube Oil System	9 VAC 5-80-720 B	VOC	
IS-7	Boiler Feed Pump System	9 VAC 5-80-720 B	VOC	
IS-8	No. 6 Fuel Oil Drain Tanks (2)	9 VAC 5-80-720 B	VOC	1,028 gallons each
IS-9	Station Degreaser System-SafetyKleen Self-Contained	9 VAC 5-80-720 B	VOC	
IS-10	No. 6 Fuel Oil Storage Tank	9 VAC 5-80-720 B	VOC	11,130,000 gallons
IS-11	No. 6 Fuel Oil Storage Tank (Amoco)	9 VAC 5-80-720 B	VOC	21,217,216 gallons
IS-12	No. 6 Fuel Oil Storage Tank (Amoco)	9 VAC 5-80-720 B	VOC	21,180,725 gallons
IS-13	No. 6 Fuel Oil Storage Tank (Amoco)	9 VAC 5-80-720 B	VOC	21,227,055 gallons
IS-14	No. 6 Fuel Oil Storage Tank (Amoco)	9 VAC 5-80-720 B	VOC	21,222,541 gallons
IS-15	No. 6 Fuel Oil Storage Tank (Amoco)	9 VAC 5-80-720 B	VOC	21,224,611 gallons
IS-16	Gasoline Dispensing Station	9 VAC 5-80-720 B	VOC	5,000 gallons
IS-17	Used Oil Separatory Tank	9 VAC 5-80-720 B	VOC	10,365 gallons
IS-18	Fly Ash Handling & Truck Loading (controlled by the addition of water)	9 VAC 5-80-720 B	PM <sub>10</sub>	

Emission Unit No.	Insignificant Emissions Unit Description	Citation	Pollutant(s) Emitted (for 9 VAC 5-80-720 B)	Rated Capacity (for 9 VAC 5-80-720 C)
IS-19	Unit 3 Fuel Oil Additive Storage Tank	9 VAC 5-80-720 B	VOC	8,813 gallons
IS-20	Hydrogen Oil Seal Tank System	9 VAC 5-80-720 B	VOC	
IS-21	No. 2 Fuel Oil-Fired Emergency Generator	9 VAC 5-80-720 B	VOC, SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>10</sub> , CO	
IS-22	Electro Hydraulic Control System	9 VAC 5-80-720 B	VOC	
IS-23	Fire Water Diesel Pump and Tank	9 VAC 5-80-720 B	VOC, SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>10</sub> , CO	575 gallon tank, 340 Hp engine
IS-24	Coal Yard Diesel Fuel Dispensing Station and Tank	9 VAC 5-80-720 B	VOC	5,000 gallons
IS-25	Warehouse Diesel Fuel Dispensing Station and Tank	9 VAC 5-80-720 B	VOC	5,000 gallons
IS-26	Emergency Diesel Generator Fuel Tank	9 VAC 5-80-720 B	VOC	584 gallons
IS-27	Oil Heater No. 2/Diesel Fuel Tank (Tank 160), constructed in 1972	9 VAC 5-80-720 B	VOC	15,571 gallons
IS-28	Oil Heater No. 2/Diesel Fuel Tank (Tank 161), constructed in 1972	9 VAC 5-80-720 B	VOC	15,571 gallons
IS-29	Oil Heater No. 2/Diesel Fuel Tank (Tank 162), constructed in 1972	9 VAC 5-80-720 B	VOC	70,438 gallons

**11. Public Participation.**

Public participation requirements of 9 VAC 5-80-270 do not apply to minor permit modifications. Under 9 VAC 5-80-210, EPA and affected states (NC) shall be notified of the minor permit modification request within five days of receipt of a complete application. The minor permit modification cannot be issued until the EPA's 45-day review period has expired.

**12. Confidentiality.**

The source has not requested confidentiality for information submitted in applications for the federal operating permit, the amendment, or in support of the applications. Using procedures defined in Form 805, which will be clarified upon request, the source may request confidentiality for any previously submitted Form 805 information, for new Form 805 information which may be submitted, or for information in the draft statement of basis, or draft federal operating permit (Article 3).